## WHAT IS CLAIMED IS:

1. A vaccine for protecting a horse against diseases associated with EHV-1, EHV-4 or a combination thereof comprising:

chemically inactivated EHV-1 KyA virus; and

an adjuvant which includes cross-linked olefinically unsaturated carboxylic acid polymer.

- The vaccine of claim 1 wherein the EHV KyA virus is chemically inactivated by treatment with a chemical inactivating agent which includes a compound selected from the group consisting of ethylenimine, derivatives of ethylenimine and mixtures thereof.
- 3. The vaccine of claim 2 wherein the EHV-1 KyA virus is chemically inactivated by treatment with binary ethylenimine.
- 4. The vaccine of claim 1 further comprising inactivated EHV-4.
- 5. The vaccine of claim 1 further comprising inactivated equine influenza virus.
- 6. The vaccine of claim 5 wherein the inactivated equine influenza virus includes inactivated EIV virus subtype A1.
- 7. The vaccine of claim 6 wherein the inactivated EIV virus subtype A1 includes inactivated EIV A1 virus strain A/EQ1/Newmarket/77.
- 8. The vaccine of claim 5 wherein the inactivated equine influenza virus includes inactivated EIV virus subtype A2.
- 9. The vaccine of claim 8 wherein the inactivated EIV virus subtype A2 includes inactivated EIV A2 virus strain Newmarket/2/93, inactivated EIV A2 virus strain Kentucky/95 or a mixture thereof.
- 10. The vaccine of claim 5 comprising inactivated EIV virus subtype A1 and inactivated EIV virus subtype A2.

- 11. The vaccine of claim 10 comprising inactivated EIV A1 virus strain A/EQ1/Newmarket/77, inactivated EIV A2 virus strain Newmarket/2/93, and inactivated EIV A2 virus strain-Kentucky/95.
- 12. The vaccine of claim 1 wherein said vaccine is capable of protecting horses against EHV-1 and EHV-4.
- 13. The vaccine of claim 1 wherein the cross-linked olefinically unsaturated carboxylic acid polymer includes cross-linked acrylic acid polymer.
- 14. A vaccine for protecting a horse against diseases associated with EHV-1, EHV-4 or a combination thereof comprising:

EHV-1 KyA virus inactivated by treatment with a chemical inactivating agent which includes ethylenimine, a derivative of ethylenimine or a mixture thereof; and

a bioadhesiye adjuvant which includes a cross-linked olefinically unsaturated carboxylic acid polymer.

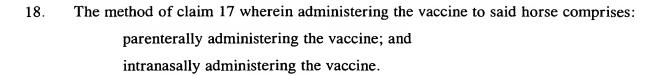
- 15. The vaccine of claim 14 wherein the chemical inactivating agent includes binary ethylenimine.
- 16. A vaccine for protecting a horse against diseases associated with EHV-1, EHV-4 or a combination thereof comprising:

inactivated EHV-1; and

an adjuvant which includes a cross-linked acrylic acid polymer having a viscosity of no more than about 20,000 cPs at 20 rpm as a 1.0 wt. % aqueous solution at pH 7.5.

17. A method for protecting a horse against diseases associated with EHV-1, EHV-4 or a combination thereof comprising:

administering to said horse a vaccine comprising chemically inactivated EHV-1 KyA virus and an adjuvant which includes cross-linked olefinically unsaturated carboxylic acid polymer.



- 19. The method of claim 18 wherein administering the vaccine to said horse comprises:

  parenterally administering the vaccine at least once in a first step; and
  intranasally administering the vaccine in a subsequent step.
- 20. The method of claim 17 wherein the vaccine further comprises inactivated EHV-4.
- 21. The method of claim 17 wherein the vaccine further comprises inactivated equine influenza virus.
- 22. The method of claim 21 wherein the vaccine comprises inactivated EIV virus subtype A1 and inactivated EIV virus subtype A2.
- 23. A method of producing an equine herpesvirus vaccine comprising:
  - (a) inoculating simian cells with an EHV-1 KyA virus;
  - (b) incubating the inoculated simian cells;
  - (c) harvesting EHV-1 KyA virus from the incubated cells; and
  - (d) treating the harvested cells with a chemical inactivating agent which includes ethylenimine, a derivative of ethylenimine or a mixture thereof to form inactivated EHV-1 KyA virus.
- 24. The method of claim 23 wherein the simian cells are Vero cells.
- 25. The method of claim 23 wherein the chemical inactivating agent includes binary ethylenimine.
- 26. The method of claim 23 further comprising adding an adjuvant to the inactivated EHV-1 KyA virus, wherein the adjuvant includes a cross-linked acrylic acid polymer.

27. A kit comprising in combination, (1) a dispenser capable of administering a vaccine to a horse; and (2) a composition to protect against diseases associated with EHV-1, EHV-4 or a combination thereof, wherein the composition comprises:

chemically inactivated EHV-1 KyA virus; and

an adjuvant which includes cross-linked olefinically unsaturated carboxylic acid polymer.

- 28. The kit of claim 27 wherein the dispenser is capable of dispensing its contents as droplets; and the composition is capable of protecting against diseases associated with EHV-1, EHV-4 or a combination thereof when administered intranasally.
- 29. A vaccine for protecting a horse against diseases associated with equine herpesviruses and equine influenza virus comprising:

chemically inactivated EHV-1 KyA virus;

inactivated EHV-4 virus;

inactivated EIV virus subtype A1;

inactivated EIV virus subtype A2; and

an adjuvant.

- The vaccine of claim 29 wherein the inactivated EIV virus subtype A1 includes inactivated EIV A1 virus strain A/EQ1/Newmarket/77; and the inactivated EIV virus subtype A2 includes inactivated EIV A2 virus strain Newmarket/2/93 and inactivated EIV A2 virus strain Kentucky/95.
- 31. The vaccine of claim 29 wherein the adjuvant comprises a bioadhesive adjuvant which includes a cross-linked acrylic acid polymer.

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